

AMENDMENT TO THE CLAIMS

1. (Original) Clutch, comprising a clutch disc (12), a calliper means (10) which carries opposite friction pads (24, 25) between which the clutch disc (12) is accommodated, said clutch disc (12) and calliper means (10) each being connected to one of an ingoing (9) and an outgoing (13) member, biasing means (32) for urging the opposite friction pads (24, 25) into frictional engagement with the clutch disc (12), motor means (2, 3) as well as screw actuation means (17-22) which are driveable by the motor means (2, 3) for displacing the opposite friction pads (24, 25) with respect to each other against the biasing force exerted by the biasing means (32), characterized in that the screw actuation means comprise two screw/nut actuators (17-22) with opposite screw threads, which screw/nut actuators (17-22) are coaxial to the clutch disc (12), one of the nut (17, 18) and screw (21, 22) of each actuator being rotatably supported with respect to either the ingoing (9) or the outgoing (13) member, and the other of said nut (17, 18) and screw (21, 22) of each actuator engaging the opposite friction pads (24, 25), the motor means (2, 3) comprising two motors which each are coaxial to the clutch disc (12) and which are driveably connected to a respective screw/nut actuator (17-22).

2. (Original) Clutch according to claim 1, wherein the screw/nut actuators (17-22) have screws (21, 22) which are rigidly connected to each other, said screws engaging the opposite friction pads (24, 25).

3. (Currently Amended) Clutch according to claim 1 or 2, wherein the motors (2, 3) are of an electric type and are concentric or at right angles to the axis.

4. (Original) Clutch according to claim 3, wherein each motor (2, 3) engages the respective screw/nut actuator through a gear drive (28-31).

5. (Original) Clutch according to claim 4, wherein each gear drive comprises a ring gear wheel (28) connected to the rotor (27) of the motor (2, 3), an external nut gear wheel (31) connected to the nut (17, 18) of the screw/nut actuator, as well as intermediate gear wheels (29) which engage the ring gear wheel (28) and the nut gear wheel (31), said intermediate gear wheels (29) being rotatably supported on a mass body (6) which is coaxial to the clutch disc (12) and which is supported with respect to the ingoing member (9).

6. (Original) Clutch according to claim 5, wherein the mass body (6) comprises two mass body parts (4, 5) one (4) of which is rigidly connected to the ingoing member (9), and the other (5) of which is rotatably supported with respect to the first mass body part (4) and is rigidly connected to the calliper means (10), said mass body parts (4, 5) engaging each other furthermore through tangentially oriented springs (8) for transferring a torque, each mass body part (4, 5) carrying a set of intermediate gear wheels (29) of one of the gear drives.

7. (Original) Clutch according to claim 6, wherein the nuts (17, 18) of the actuators are rotatably supported through oppositely oriented angular contact bearings (15, 16) with respect to the mass body part (5) which is rigidly connected to the calliper means (10).

8. (Original) Clutch according to claim 7, wherein the biasing means comprise compression springs (32) which are accommodated in blind bores (33) and which engage a pressure plate (23) which carries one of the sets of friction pads (24).

9. (Original) Clutch according to claim 8, wherein the screws (21, 22) of the actuators are connected through a spline/groove connection (34) and an abutment piece (33) to the pressure plate (23) which carries said one set of friction pads (24), the calliper means (10) having an inwardly extending bracket (11) which carries the opposite set of friction pads (25) and the clutch disc (12) being translatable in the axial direction.

10. (Currently Amended) Clutch according to ~~any of the preceding claims~~ claim 1, wherein a housing (1) is provided onto which the stators (26) of the motor means (2, 3) are rigidly connected, said housing (1) having opposite coaxial openings (34, 35) for the ingoing member (9) and outgoing member (13).

11. (Currently Amended) Clutch according to ~~any of the preceding claims~~ claim 1, wherein the screw/nut actuators (17-22) comprise a ball, roller or friction type actuator.

12. (Original) Clutch according to claim 11, wherein the ball screw actuator has ball recirculating means accommodated in the screw.

13. (Currently Amended) Clutch according to ~~any of claims 3-9~~ claim 3, wherein the electric motors are driveable as electric generators.

14. (Currently Amended) Clutch according to ~~any of claims 3-9 and 13~~ claim 3, wherein the electric motors are driveable in unison for providing a torque boost.

15. (Currently Amended) Clutch according to ~~any of the preceding claims~~ claim 1, wherein an automatic balancing device is provided.

16. (New) Clutch according to claim 13, wherein the electric motors are driveable in unison for providing a torque boost.